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ABSTRACT

Focusing on procedures and strategies suitable for teaching writing to students in grades 4, 6, and 8, this paper examines the factors that have been shown through research to influence effective writing. The paper divides the research examined into the categories of metacognition; socially-based writing strategies; theory-tested approaches to writing; technology; modeling and guided instruction; the reading/writing relationship; and situational factors. The paper concludes that: (1) metacognition received firm support; (2) socially-based writing strategies received mixed results; (3) those theory-tested approaches that incorporated instructional techniques were more effective in improving writing than those which did not; (4) word processing and instructional television improved the quality of student writing; (5) guided instruction and teacher modeling of writing seemed to have positive effects on students' writing; (6) studies investigating the reading/writing relationship supported, in varying degrees, the contention that instruction in reading skills improves writing ability; (7) allowing students to choose their own topics cannot be regarded as a factor which might influence effective writing; and (8) providing students the opportunity to write may be more important than providing instruction in how to write. The paper concludes with four recommendations for practice and four recommendations for research. (Contains 27 references.) (RS)

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FACTORS INFLUENCING EFFECTIVE WRITING

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WHAT IS WRITING?

Writing begins as an individual act of thinking and ends as a social act of communication. In the long run, the ability to communicate through writing will improve one's quality of life academically, socially, and even financially. A strong writer will have high self-esteem and the admiration of his/her peers. In the end, writing brings its creator power (Murray, 1984).

Although effective writing appears effortless, it is not produced without a process. To complete this process, one must follow a logical sequence of activities that is spelled out in a variety of studies, articles, and books.

Writing in school takes many forms. A journal entry for language arts, an essay for a science or math project, a report for geography are all different types of writing for different audiences. Yet regardless of the purpose, a thinking and writing process occurs that follows a logical pattern.

With the recent surge of interest in the composing processes of writers, educators and researchers of writing have begun to offer an array of hypotheses and insights into the different factors which contribute to the quality of writing. The purpose of this literature review is to examine those factors that have been shown through research to influence effective writing. This review was undertaken at the request of a Connecticut school system, which specified that an emphasis be placed on grades four, six, and eight. Therefore the question to be answered is, "What procedures and strategies are effective in teaching writing to students in grades four, six, and eight?"

In examining the research, it was observed that writing strategies seem to fall within a pattern of categories, such as metacognition, socially-based writing strategies, and so forth. Unfortunately, not all research looked at one strategy; at times, a study examined a multiple of strategies. In these instances, the study was categorized according to that factor which seemed to receive the greatest emphasis in the research, with references sometimes made to the study in other sections.

FACTORS INFLUENCING EFFECTIVE WRITING

Metacognition

Metacognition can be defined as awareness of one's own thinking and problem-solving processes. When applied to writing, it refers to the writer's awareness and use of writing strategies. Stated another way, it is concerned with the writer's direct conscious and selective attention to the cognitive processes contained within the composing act.

A study to examine the role of metacognition in improving expressive language through creative writing was undertaken by Goodman (1990). In a practicum designed to develop critical thinking, six students (grades two through six) who were experiencing difficulty generating ideas and organizing thoughts were trained to develop and communicate thoughts about a particular topic in an organized manner. One strategy consisted of think sheets for planning, organizing, editing, peer editing and revising. The planning think sheet helped the students to think about the audience, purpose and information about the topic. The organizing think sheet provided a specific guide, containing questions and key words associated with the specific text structure. The edit think sheets helped the student writer to evaluate whether the text structure questions were answered. The peer editing think sheets helped illuminate the audience as to the meaning of the paper. Another strategy used to foster thinking during the writing process was the use of diagrams and maps to help illustrate and define the necessary elements in a story: title, setting, characters, problem, goal, episodes, and resolution. Three different types of maps were used to help the students structure their compositions: (1) the sequence map was used when ideas needed to be organized in a sequential order for writing; (2) the classification map was used when categories and examples had to be expanded with special details; (3) the description map was used when special features and details needed to be added. A third metacognitive strategy incorporated into the study was the use of magazine pictures to stimulate creative writing. Students were encouraged to analyze their picture before writing. Questions were answered, such as: "What do you see when looking at this picture?" "What is

going on in the picture?" "Do you see a problem or situation that is occurring in this picture?" Thoughts were thus clarified. Obtained results indicated that there was significant improvement in the progress of most of the students after using a definite structured writing plan. All four students showed development in the area of cohesive story writing. Prior to training, the students had difficulty with idea generation. Discussions concerning where the story took place, who the characters were, and what the problem situation in the story was, helped to clarify the writing so the student had a blueprint for the creative writing passage. When students were given time to think about stories to be written and required to answer questions in a specific sequence using the story map and other brainstorming activities, the quality of the stories improved immensely.

Elliott (1992) examined computer-based metacognitive guidance provided by a computer-based tool called the "Writing Partner." According to Elliott, the major contribution of the "Writing Partner" intervention is twofold: it provides the desired guidance through the entire writing process on a one-to-one basis, and it has the potential to generate a unique "intellectual partnership" that acts to stretch thinking processes, expand "cognitive workspace" and facilitate internalization of metacognitive processes. Students are guided through (a) the planning phase (consideration of audience, goal, characters, setting, story ideas and plot); (b) the composing phase (continuous examination, elaboration, monitoring and evaluation of story ideas and structure by means of guiding questions of a metacognitive nature); and (c) the revising process, through guiding questions that promote two-way reflection on both rhetorical and content aspects of text, as well as on writing mechanics. In the study, two poor writers and two skilled writers used the Writing Partner over a ten week period to complete narrative writing activities. Results showed that, for the novice writers, overall story quality improved, as did several key elements of narrative structure. In addition, novice writers showed evidence of greater metacognitive knowledge of the processes involved in planning, composing, and revising narrative text. Expert writers too, showed improvements in overall story quality, but since they were already accomplished writers, these improvements were more subtle. There was no

evidence of substantial gains in their understanding of the metacognitive processes involved in story writing.

In a study designed to investigate the use of visual organizers to enhance metacognitive knowledge, Matheson (1980) hypothesized that the tree-diagram, a graphic, multi-dimensional classification device, would provide students with the critical thinking skills needed to systematically search for and organize the content of their descriptive paragraphs to meet some communication goal. Using a system of interconnected circles, the tree diagram visually organizes and classifies the ideas to be used in a particular writing piece. A typical procedure for using the tree-diagram organizer for descriptive writing, as taught to the students in the study, requires the writer to (1) study a picture and identify the focal point; (2) identify the feeling the writer wishes his/her reader to have about the picture; (3) make a list of all the synonyms needed to communicate this feeling; (4) start making the tree diagram by looking at the components of the picture; (5) break the main components down into their parts; (6) generate rich language by listing the physical, behavioral and environmental attributes of each small part of the picture, including similes and metaphors; (7) start writing by introducing the setting; and (8) write at least one good sentence about each part of the picture varying sentence patterns.

The tree-organizer was used by the students in the experimental group; students in the control group were taught to write descriptive paragraphs by emulating good writers. Students' writing pieces were judged on three variables: (1) general impression of the piece, obtained by reading the piece without stopping to analyze it; ratings were poor, fair, good and very good; (2) descriptive elements - the frequency and appropriate use of verbs, nouns, adjectives, adverbs, phrases, clauses, similes and metaphors; and (3) thought organization, consisting of the main impression, or the feeling the writer wishes his/her reader to have about the scene being described, and the classification of things or elements which go together to form the composition of a picture. Results indicated significant differences, revealed by the analysis of covariance, between the post test scores of above average and average ability treatment students on all three variables. Results of the same statistical procedures on the post test scores of below

average treatment and control students showed a significant difference between general impression and descriptive elements but not for thought organization. While Matheson states that the findings in the study would have to be replicated before final conclusions about the benefits of using a tree-diagram organizer could be drawn, her research suggests that using a tree-diagram as a pre-writing organizer can significantly improve the quality of grade seven literary descriptive paragraphs.

As noted in the research just discussed, in the area of writing metacognitive processes have been shown, in specific instances, to aid students in their writing achievement. Although the metacognitive strategies varied in each of the three research studies, the findings suggest that teaching students to think before writing results in more effective written communication.

Socially-based Writing Strategies

Since writing is an act of communication, it makes sense that potential writers should be involved in a substantial and varied amount of communicating (Labercane, 1988). Writing approaches which recognize writing as a collaborative or social act stress the importance of speech and collaborative learning in carrying out and completing the task of writing (Labercane, 1988). Sharing the philosophy that students learn to read and write in the same way that they learn to talk, these approaches encourage writing for real or authentic purposes, in cooperative settings in which reading, writing and speaking are shared with one's peers. Cooperative learning, talk, and role-playing are three strategies which reinforce the social, communicative aspect of writing.

Cooperative learning, as defined by Johnson, Johnson and Holubec (1990) is instruction in which students work together in small groups to accomplish shared goals. Members of the group share resources, provide mutual support, and celebrate their joint success; as a result, learning is maximized (Johnson et al., 1990). Its effectiveness in improving writing is described in research cited by Donato (1990). Smith (1983), as cited by Donato (1990), suggested that collaborative techniques had a much greater positive effect on learning than had been realized

since writing could have been learned coincidentally from interactions with others very much the way babies learned to speak by listening to others around them. Teale (1982), as cited by Donato (1990), suggested that when students interacted with their peers while writing, and when the teacher took on the role of a facilitator, students may very well have learned to write more effectively.

A study investigating the role of cooperative learning and process writing experiences in the improvement of writing skills was conducted by Donato (1990). "Process writing," as defined by Cordeiro (1992), is the manner of teaching writing in which teachers and students explore together the process that writers go through, focusing their attention not only on the writing but also on the writer. Writing in the process approach involves movement through the steps of prewriting, drafting, revising, and editing (Cordeiro, 1992). In the writing program designed and implemented by Donato (1990) cooperative learning experiences along with curriculum adjustments through use of the writing process were implemented for an eight-month period for the purpose of increasing the writing quality, quanitity and variety of fifth-grade students.

Specific cooperative learning implementations involved the formation of writing triads in which three students conferenced with and coached each other as they progressed through the writing process. In addition, partnerships were formed in which each fifth-grade student worked with one low-level language student from first grade to produce one or more stories a month in the form of a book. While learning another dimension of cooperative learning, students received added practice in the writing process.

The writing process was implemented by having students write on topics they chose while going through the writing process stages. Journal writing, letter writing and writing stories were some of the kinds of writing used to develop a variety of purposes and styles while writing for a variety of audiences. In addition, students wrote and shared at least one poem per month. Through small group conferences, students learned the necessary writing skills.

Results of the study showed (1) an improvement in student quality of writing in terms of content and mechanics; (2) an increase in the quantity of voluntary writing in terms of number of

words written and the number of works produced; (3) an increase in the variety of writing produced (description, exposition, persuasion, expression, narration, and poetry); and (4) a positive improvement in feelings about writing as demonstrated by a pre and post Attitude Survey.

Cooperative learning was the focus of research carried out by Stevens (1986), in which a comprehensive cooperative learning approach to elementary reading and writing instruction, Cooperative Integrated Reading and Composition (CIRC), was evaluated. A twelve-week experiment compared 11 grade 3-4 CIRC classes to 10 matched control classes. In the CIRC experimental group, students worked in heterogenous learning teams for all reading, language arts, and writing activities. In reading they worked with partners during follow up times on partner reading, vocabulary, spelling practice, and literary activites based on basal stories. Students worked in teams on structured reading comprehension and language arts activities, and engaged in peer editing in writing.

During language arts periods, experimental teachers used a language arts/writing curriculum specifically developed for the project. The emphasis of the curriculum was writing; language skills were introduced as specific aids to writing rather than as separate topics. On all writing assignments, students drafted compositions in consultation with peers, and then edited one another's work using peer editing forms focusing on content of the composition and its grammatical correctness. Revision of writing pieces was based on this peer feedback.

Results in the area of writing showed statistically significant differences favoring the experimental group in the area of writing organization (planning). No differences were found in the areas of writing mechanics (use of capitalization, plurals, abbreviations, numbers and spelling), or writing ideas.

The function of talk in the process of writing was examined in a study conducted by Labercane (1988). It is believed that talk makes writing less of a solitary act and more of a collaborative venture, and that it plays a central role in assisting in the process of helping writing to find its own meaning (Labercane 1988). In his qualitative study, Labercane observed three

children over a six month period, noting the talk they employed as they wrote. In the planning stage, talk was an internal process which involved answering organizational questions beginning with "who," "what," "when," "where," "why," and "how." As students progressed to the conferencing stage of the writing process, talking with peers and teacher helped students construct, rehearse, make meaning of, and revise their text; in addition, it provided a forum in which they were able to receive support and encouragement. Labercane notes that while talk seemed helpful for generating ideas, drafting or writing a text seemed to be accomplished more efficiently when done by the single author. Thus, he draws the conclusion that, in his study, collaborative writing involving talk served a social rather than an academic function. For the majority of students, collaborative writing was fun, and it encouraged more ideas; it could therefore be considered an essential form of prewriting. On the other hand, to write productively, students felt they needed to compose alone; drafting and revising, to be efficient, required independent work.

The importance of role-playing in fostering persuasive letter writing skills was examined by Wagner (1987). Role-playing, as described by the National Council of Teachers of English and the Children's Theatre Association, as cited by Hennings (1990), helps students to "develop improved skills in reading, listening, speaking and writing...develop skills in thinking analytically, in acting decisively and responsibly...increase and sustain the ability to concentrate and follow directions..increase motivation to learn...develop individual and group creativity."

In a quasi-experimental study Wagner (1987) studied the effect of role-playing on persuasive letter-writing. Persuasive letters written by each of 84 fourth and 70 eighth graders in response to three different writing prompts provided the data for the study. Students wrote their letters in one of three thirty-five minute instructional conditions: role-playing prior to writing, direct instruction prior to writing, and no instruction. Results indicated that fourth and eighth graders who role-played produced persuasive letters that were more oriented toward their target than students who had a lecture and examples or those who had no instruction. In considering the implications of these results for teaching, Wagner (1987) states that role-playing in partners,

for fourth graders, is a significantly more effective strategy for developing audience-adapted persuasive letters than the presentation of information with an analysis of models and showing a set of rules. For the eighth grader, role-playing approaches significance in its effectiveness over direct instruction. Typical teacher instruction (lecture and examples) is only slightly more effective than no instruction, even for eighth graders.

The social context of writing, involving the knowledge of one's purpose for writing and one's audience, is recognized by researchers and writers as one of the major elements responsible for effective written discourse. It is believed that when purpose and audience are emphasized, students are more likely to become aware of the social and communicative purposes of writing (Raphael, Englert, & Kirschner, 1986). Social context was studied by Raphael, Englert, and Kirschner (1986) in a research project which examined the impact of text structure instruction, social context, and the combination of text structure instruction and social context on expository writing. (Expository writing is nonfictional; its purpose is to explain or teach. Examples are news articles, research papers, biographies.) One hundred fifty-nine fifth- and sixth-grade students were assigned to three treatment groups (social context, text structure, social context/text structure) or to the no treatment control group. Students in the social context treatment group engaged in paper and pencil activities which prompted them to consider their subject, audience, purpose and organization as they proceeded through the steps of the writing process. Results of the study indicated that students who wrote and edited their expository papers with a focus on writing process, audience, and purpose made specific gains in their ability to organize and compose expository text.

The social dimension of writing as a factor which can influence the effectiveness of writing was the focus of this section. While some research indicates that that the social context in which students learn to write impacts all components of the writing process (pre-writing, drafting, revising, editing), other research indicates that the value of factors such as talk, role-playing and cooperative learning is limited to pre-writing activities only. All of the studies support

the common belief, however, that the recognition of writing as an act of communication is important in the development of good writing skills.

Theory-tested Approaches to Writing

The relative effectiveness of different approaches to improve writing is a debate being carried on by current theorists of writing composition. A study contrasting the effects on writing of three instructional treatments based on different theories of writing instruction was carried out by Smagorinsky (1991). Subjects were required to write essays involving the definition of abstract concepts such as "friendship" or "leadership." Students in the models treatment studied, labeled, and evaluated models of definition essays. Students in the general procedures treatment were taught freewriting and brainstorming to generate criteria and contrasting examples, in addition to revision strategies. Students in the task specific procedures treatment were taught the procedure of studying problematic examples to generate criteria and contrasting examples, plus strategies for revision.

A comparison of pre- and posttest scores showed that students in the models treatment entered the study with a poor ability to think critically about the definition writing task and gave evidence on the posttest of a still poor but improved ability. Students in the general procedures treatment entered with a relatively good ability and did not improve it. Students from the task-specific procedures treatment entered with a poor ability and gave evidence of improvement towards a relatively good ability. The research seems to indicate that teaching writing solely through the study of model essays is less effective than teaching which incorporates instructional techniques. When the study of models was combined with the strategies used in the general procedures and task specific treatments - freewriting, brainstorming, and generating criteria from problematic examples - the students in the study were able to produce essays which showed they were thinking critically about the concepts being defined.

A study was undertaken by Davlin and Riggle (1988) to determine if there would be a significant difference in the writing skills of eighth graders after they completed a writing class,

conducted on a daily basis, in which the writing process was used as the method of instruction. For nine weeks, eighth grade students received daily writing instruction in which they were taught the organization of a paragraph, the steps of the writing process, and the development of specific kinds of paragraphs. The writing skills evaluated, throughout and at the end of the class, were paragraph development, sentence development, grammar, and mechanics. Pretest and posttest scores were obtained using writing prompts in which thirty skills were analytically scored. Results, which showed a 10% increase in the students' writing skills at the end of the nine week course, supported the hypothesis that eighth grade students, who have received daily instruction in the writing process for a period of nine weeks, will increase their writing skills. The findings suggest that writing quality increases when writing instruction centers on the writing process and when daily opportunities for writing are provided.

The efficacy of whole language strategies to improve reading and writing skills and scores was examined by Combs (1992). Whole language strategies involve meaningful reading and writing experiences, implemented through classroom activities which are learner-centered and integrated across the content areas. The subjects were fourth-grade gifted students experiencing problems with critical reading skills - skills which require a reader to simultaneously make observations, produce inferences and form hypotheses while reading. Using literature rather than textbook (basal) readers, the students were encouraged to develop critical thinking skills through class discussion of the assigned reading. Literature logs recorded unfamiliar words, new characters and chapter settings. Vocabulary instruction focused on the use of context clues from the surrounding words and sentences in the story to determine word meaning. After completing The Mouse and the Motorcycle, the students wrote their own book entitled The Further Adventures of Ralph. Each student was required to write a chapter, keeping the characters true to the changes in their development in the original book. Following the completion of this assignment, the students read Charlotte's Web, implementing the whole language strategies they had just learned. Literary activities included "Spider Studies", a

research project carried out in cooperative learning groups, and a bulletin board which illustrated "Pig Facts: Fact vs. Opinion."

Results of the study showed an increase in higher level thinking skills and gains in vocabulary as a result of using the whole language approach over a span of three months. Performance on the Iowa Tests of Basic Skills administered in the fall of 1991 showed the fourth grade students scoring in the fifty-fifth percentile in critical reading areas of vocabulary, language and reading skills subtests; scores on the Iowa Tests administered in the spring of 1992 showed gains of thirteen percent in vocabulary and thirteen percent in reading and language subskills.

The studies which have just been reviewed suggest how writing skills taught in different instructional treatments influence the effectiveness of writing. Results seem to indicate that writing approaches which provide specific instruction about writing and promote critical thinking are effective in improving writing expression.

Technology

The role of Instructional Television (ITV) in meeting the cognitive and affective writing needs of teachers and children has been the focus of recent research. Lipa (1989), citing the need for on-site help for teachers and students to effectively use process writing, conducted an experimental study to research the effectiveness of an Instructional Television Program designed to model and teach aspects of process writing to second-grade children. (The process approach to writing is one that allows exploration and discovery through prewriting activities, development through drafting, coherence and clarity through revising, and finally, correctness through editing. It views the acquisition of writing skills as a cumulative experience rather than a linear one.) The ITV program, Fins, Feathers and Fur, was designed to model process writing and to teach several writing conventions to primary grade children. Based on previous research regarding effective utilization, several questions were addressed in the study:

1. Will children demonstrate their learning of the specific ITV program objectives?

2. Will the use of ITV act as a writing motivator and instructional guide for children and teachers?

3. What aspects of this ITV program are most valuable for instruction?

4. Will teachers report ITV to be an effective instructional tool?

Two second-grade teachers and their students, twenty-four per class, comprised the experimental groups; one second-grade teacher and her twenty-four students comprised the control group. All groups were given two writing workshops designed to demonstrate aspects of process writing that were highlighted in the ITV program. In addition, the experimental groups were instructed to: (1) obtain a pre-writing sample from the children prior to showing any videotapes; (2) introduce each video program by using one of the suggested pre-viewing activities in the teacher's guide; (3) show the videotaped programs twice per lesson; and (4) ask children to complete the program worksheets after the second viewing. The teachers could use any of the writing activities suggested in the teacher's guide.

The control group was given the Fins, Feathers and Fur manual and the program objective worksheets. In place of viewing the videotapes, the control group teacher used instructional guidelines from the Fins, Feathers and Fur manual to meet the lesson objectives.

The series Fins, Feathers and Fur consists of 15 fifteen-minute video programs designed to provide adjunct instruction in the writing process to primary grade children, specifically second graders. Each program models the writing process in its entirety while highlighting one aspect of the process for instructional purposes. Programs 1-3 highlight the brainstorming and organizing aspects of pre-writing; programs 4-6 highlight drafting processes which include sentence writing, paragraph writing, maintaining topic coherence, and expanding sentences through the use of adjectives and time sequencing. Objective data evaluation was based on children's responses to program objectives through their completion of program evaluation sheets and utilization packet worksheets in the first six Fins, Feathers and Fur programs. Subjective data was obtained through interviews with experimental and control teachers after they had used the video programs and had children complete the test items.

Objective data showed little differences existed between the experimental and the control groups for some of the variables, such as words and labels, multiple word descriptors, paragraph writing, capitalization and punctuation. However, there were significant differences between the experimental and control groups in the categories of idea webbing, sequencing and indenting, thus supporting the effectiveness of ITV in presenting specific process writing objectives.

Reports from experimental and control group teachers were positive regarding the use of the program for classroom instruction in process writing. When asked "What aspects of this ITV program were most valuable for instruction?" the teachers indicated that new ideas such as word webbing (similar to a tree diagram), innovative approaches to instruction such as paragraph framing, and direct instruction of difficult concepts such as sequencing were most valuable for instruction. In addition, the teachers reported carry over and use of the ITV techniques in other subject areas such as reading and literature.

The efficacy of microcomputers in the teaching of eighth grade writing skills was examined by Eastman (1989). Based on previous research in the area of writing skills and computers, the following expectations were formulated: (1) students using computers will demonstrate more use of both lower-order editing (additions and deletions for clarity) and higher-order editing (structural revisions and major coherence changes) than noncomputer students; and 2) students using computers will have fewer errors in their final drafts of end-of-semester papers than the students using paper and pencil.

Altogether, 724 eighth graders participated in the three-year project. Students were grouped into computer, mixed and noncomputer classes. In the computer treatment, each student had a personal computer at his or her regular workspace. In mixed classes, students moved around from table-arm seats to computer tables shared a computer or working alone as they preferred. All 30 classes studied the same writing and revising processes and skills during each 19-week semester. Each student was assigned 28 graded writing assignments, ranging from imaginative stories to factual reports and persuasive essays. Both the quantity and quality

of student achievement in writing was assessed by comparing the number and quality of papers written by each student, grouped for better, middle, and poorer initial writers in the computer, mixed and noncomputer classes.

Results, measured by standardized competency test scores and by holistic evaluation of writing samples, showed that computer students averaged significantly higher scores for overall quality, creativity and higher-order editing than the mixed or noncomputer students. Computers contributed to the higher scores, according to Eastman, by increasing motivation and academic learning time (time spent writing), thus speeding up the learning process. However, it must be pointed out that, in this study, in order to maximize the value of using word processing, a computer was needed for each individual student during every class meeting. The providing of individual word processors seems an unrealistic prerequisite, financially, for many of the public schools attempting to improve the quality of writing of their students.

Results of studies conducted by Lipa (1989) and Eastman (1989) investigating the use of technology to develop writing skills appear to suggest that (a) instructional television, as an adjunct to classroom instruction, and (b) individual student computers, when resulting in increased motivation and academic learning time, are effective instructional tools for teaching writing.

Modeling and Guided Instruction

Descriptive writing is one of the modes of writing (the others being narration, exposition and argument) taught in the classroom. It can be argued that while students are given frequent opportunities to practice writing stories, they receive little actual instruction in writing stories.

Recently, research has focused on the effects of teacher-guided instruction and teacher modeling on students' ability to write descriptive and imaginative stories. A study by Gambrell and Chasen (1991) investigated the effects of explicit story structure instruction on below-average fourth- and fifth-grade readers' narrative writing performance. The subjects were randomly assigned to one of two treatment groups: (1) explicit story structure instruction (ESSI)

group, and (2) story structure awareness instruction (SSAI) group. The ESSI group participated in lessons which consisted of the following: (1) introduction of story structure grammar, the concept of designing a story which includes necessary story elements; (2) story examples, in which the story structure of various pieces of literature were examined; (3) teacher modeling of "writing" of stories; and (4) teacher-guided story generation, in which the students composed a story with teacher guidance. The SSAI group received instruction in story structure elements, but without teacher modeling or teacher-guided story generation.

All subjects participated in writing a story based on a writing prompt given to them. Each story was assessed and scored. Scoring was based on complexity and presence of story structure elements.

The findings of this study indicate that there was a statistically significant difference between the ESSI group and the SSAI group writing. A total of 65% of the students in the ESSI group wrote stories that included a complete episode or a complex story, while only 25% of the students in the SSAI group wrote such stories. Also, more story structure elements were evident in the writing of students in the ESSI group than in the SSAI group. The results suggest that explicit story structure instruction is more effective than less explicit story structure awareness instruction for improving the narrative writing ability of below average readers. Teacher modeling and teacher-guided application methods of instruction highly contributed to the significant performance of the ESSI group. The foundation that was necessary for students to compose a well-written narrative story was provided by the teacher during the teacher-guided application phase of the instruction. Gambrell and Chasen (1991) conclude that explicit story structure instruction improves the quality of narrative writing of students; in addition, they conclude that teacher modeling and teacher-directed application are important elements of explicit story structure instruction.

Guided imagery was the focus of research conducted by Jampole (1991). His study examined the effects of guided imagery training on students' writing developments, including fluency, originality, writing length, vividness of imagery and descriptiveness.

The subjects, 38 gifted fourth- and fifth-grade students, were randomly assigned to an imagery treatment group or control group. The imagery treatment group was given passages that contained descriptions which drew upon the seven senses: visual, auditory, tactile, kinesthetic, olfactory, organic and gustatory. Subjects were taught how imagery can be used as a thinking and learning tool; in addition, they were given guided instructions on how to use imagery as a story was being told to them. Subjects in the control group were simply asked to listen to a story and then answer literal and interpretive comprehension questions. They were given no teacher-guided instruction.

Post-tests were administered which required the students to (1) write a story based on what they imagined was occurring in a picture which was shown to them; and (2) rate 35 imaginal items (such as a settting sun) on a scale from 1 to 5, low to high vividness, based on how well they could imagine the picture in their minds. Results indicated that imagery training notably affected originality in creative writing. The treatment group's stories became more imaginative and more picturesque in speech. Students in the treatment group included more individual responses in their writing, such as relating and discussing experiences similar to their own lives. In addition, they included significantly more sensory descriptions than the control group. Results of this study suggest that imagery training and teacher-guided instruction can be beneficial for improving writing abilities if implemented in the classroom on a regular basis with modeling, feedback and practice components.

Based on the findings of the research just reviewed, it might be argued that modeling, teacher-guided instruction, and imagery training are three strategies which influence the effectiveness of writing.

The Reading/Writing Relationship

The connections between reading and writing have received much attention recently. A study to determine whether the writing of persuasive discourse can be improved by instruction in reading and vice versa was undertaken by Crowhurst (1991). The two questions examined were

(a) Can students' writing of persuasion be improved by instruction? and (b) Will instruction and practice reading persuasion improve the writing of persuasion, and conversely, will instruction and practice writing persuasion improve the reading of persuasion? Subjects were students in two sixth grade classes in a middle-class suburban area, randomly assigned to one of four treatment groups: (1) instruction in a model for persuasion plus writing practice; (2) instruction in a model for persuasion plus reading practice; (3) reading novels and writing book reports plus a single lesson in the persuasion model; (4) reading novels and writing book reports (control group). Instruction was given for ten 45-minute lessons over five weeks. Pretests and posttests each consisted of a written recall of the content of a persuasive text and two persuasive compositions. Results of the research clearly support the view that persuasive writing skills can be improved by instruction. Both the writing group and the reading group improved significantly on writing quality from pretest to posttest. Both wrote longer compositions than the control group on the posttest, used more conclusions and text markers, used greater elaboration, and organized thoughts better. Concerning the relationship between reading and writing, results offer modest support for the view that reading persuasion improves the writing of persuasion, and that both instruction in the model and experience reading help with the development of a schema for persuasion which students are able to use in their writing. There was no clear positive support for the question, "Will instruction and practice writing persuasion improve the reading of persuasion?"

A study exploring a variety of variables linking fourth graders' reading comprehension and writing ability was conducted by Schewe (1986). The study investigated (1) the relationship between both recall and comprehension scores in reading and scores in writing, (2) the effects of reading and writing competence on the production of story grammar categories in writing (that is, story structure elements, such as setting, character, conflict, and resolution), (3) the relationship among writing scores and the components of an analytic writing scale (a writing assessment tool), and (4) the qualitative differences in students' use of story grammar categories in both reading recall and writing.

Subjects, 36 fourth graders from two Canadian schools groups according to high, average, or low reading ability, read and responded to two passages and produced writing samples in the classroom over a 4-week period. Analyses of responses and writing samples indicated the following: (1) While all measures of reading ability used in the study were valid predictors of writing quality, inferential questions (questions requiring the reader to make deductions based on what he/she has read) were the best predictors of overall writing performance; in addition, inferential questions were valid predictors of story grammar usage in writing. (2) Students who were more proficient writers tended to use their story grammar knowledge more efficiently in structuring their written products than did the less proficient writers, in both average and low writing ability groups. (3) All components of the analytic writing scale used in the study were related to the overall writing quality scores at a statistically significant level. The mechanics and story grammar categories of the writing scale were the best predictors of writing ability results. (4) While the most proficient readers recalled more details per story grammar category, it was the average ability writers who recalled and produced the greatest number of details when compared to the other two groups. Thus it would appear that the quantity of details recalled and produced is not a valid indicator of reading and writing ability.

A study to examine the effectiveness of a writing strategy for enhancing comprehension of content area information was conducted by Konopak, Martin and Martin (1990). Subjects were 48 six-grade students studying world history. The procedures for the study included speaking, listening and reading for all students, with writing the variable of difference between the experimental groups. Over four days, the treatment group was assigned writing tasks following class brainstorming and text reading activities; in contrast, the control group was given short-answer type assignments. Based on a written posttest, results showed that the treatment group generated significantly higher quality ideas than the control group, including fewer text-based ideas and more class brainstorming ideas, and produced more coherent, integrated writing samples. In addition, within the treatment group, students significantly improved their writing with regard to both overall writing ability and the quality of ideas during the four-day period. The

researchers concluded that the use of writing was the most important variable in developing students' comprehension in the study. They further conclude that the addition of a purposeful writing activity can further facilitate analysis and synthesis of new information with existing knowledge in the area of content learning.

A study of the effect of text structure instruction on the comprehension and composing of expository text was part of a research project undertaken by Raphael, Englert, and Kirschner (1986) to study the impact of text structure instruction and social context on students' comprehension and production of expository text. Text structure refers to the different modes of writing, which include narration, description, exposition and argument. Expository writing, as mentioned earlier in this review, refers to nonfiction writing which conveys information.

Subjects in the study, 159 fifth- and sixth-grade students, were divided into three treatment groups and one control group for the purpose of testing the relative effects of social context, text structure instruction, or the combination of social context and text structure instruction on students. Students in the text structure group were taught with materials which illustrated well-written texts using different structures; the materials were designed to prompt students to consider the elements that contribute to a well-formed paper. Another set of materials consisted of four sample passages taken from the students' social studies text, one passage each to represent the structures found in expository texts: comparison/contrast, problem/solution, explanation, and narrative. For each passage a reaction guide was developed consisting of questions for the text type. In addition, planning sheets containing questions relevant to each particular text structure were used to encourage the use of text structure in the writing process; overhead transparencies consisting of "pattern guides" of the different text types were likewise used to help in the task of writing.

Results showed that students receiving instruction in text structure made specific gains in their proficiency to write the comparison/contrast text structure forms. On tests which analyzed the transfer of writing instruction to reading, results supported the positive effects of text structure instruction on students' reading performance. On the measure of students' ability to

synthesize information from multiple sources, students in the text structure group (as well as the social context group) made significant gains and surpassed all other groups. In an effort to explain why students in the text structure group transferred their knowledge from writing to reading, Raphael, Englert & Kirschner (1986) considered the components of the instructional program. Students in the text structure group received instruction that promoted making connections between reading and writing. They read social studies texts that conformed to text structure expectations, and they also read the texts as bases for gathering, composing, and revising their own expository papers. According to the researchers, these activities could well have heightened students' awareness of how to read and comprehend expository texts.

Research investigating the reading/writing relationship indicates a link between reading and writing, although the nature of the link is not altogether clear. Nevertheless, results provide modest support for the contention that instruction in reading may improve both the planning and production of written language.

Situational Factors

The effectiveness of student choice of topic on the improvement of writing skills was investigated by Chou and Vaught (1982). The study sought to determine if sixth grade students would write longer compositions based on topics of their interest and choice, rather than topics arbitrarily assigned to them.

Subjects for this study included 42 sixth-grade students equally divided into two groups. In the first treatment, one group wrote on a topic of their choice, the other group writing on an assigned topic. The second treatment, given a week later, was a reverse of the first treatment: the group that had written on a topic of choice now wrote on an assigned topic, and vice versa.

Results showed that there is a significant difference in length between writing samples in which students are allowed to choose their own topics and those in which the topic is assigned, with the former containing more words. The researchers conclude that when increased length of

writing samples is a desired objective in a writing lesson, students should be allowed to choose their own topics.

Another study focusing on choice of topic was conducted by Peyton and Seyoum (1989). This study examined teacher strategies used to promote dialogue journal writing and the effect of these strategies on the length and complexity of the students' writing.

Allowing students to write on self-selected topics rather than teacher-generated topics seemed to be the most effective strategy in promoting student writing. When questions to elicit student writing focused on areas of interest to the students, the result was more frequent student responses; however, it must be noted that the frequency of responses to questions did not necessarily produce a greater quantity of writing or more complex writing. Choice of topic was of key importance to the study by Peyton and Seyoum; they conclude that if the student is not interested in the topic for writing, there is little the teacher can do to increase the response.

A study by Busch (1985) examined (1) whether students showed growth in writing ability if provided the opportunities to write frequently in a supportive environment without direct teacher instruction; and (2) whether students' written language growth was a continuous progression of upward movement or was sporadic in nature.

A holistic evaluation procedure was used to rate a total of 453 writing samples written by ten students over a period of two years. Samples of writing were taken from the students as second graders and again two years later when they entered fourth grade. Ten untrained raters were then asked to read the samples and devise their own criteria to evaluate the writing. Results showed that the raters were able to identify a pattern of growth in the writing of the second grade students over a 14-week period, but less able to discern growth in the fourth grade writing samples since the writing was basically more sophisticated. However, a pattern of growth across all grade levels was noted by the raters. Spelling and punctuation were one factor which differentiated the two grade levels; length of texts was another. Noticeable growth was also seen in the areas of text content, organization and language.

Results of the study demonstrated that if children are provided the opportunity to write frequently in a supportive environment, growth in writing ability becomes evident. However, the results also indicated that growth and development of writing ability is not the same for all children, nor is the process necessarily one of steady progression. According to Busch (1985) the fact that the students did not receive any guidance from teachers before or after the writing event demonstrates how powerful the act of writing is and provides evidence that growth and development of literacy requires engagement in the process. Busch concludes that providing children the opportunity to write may be more important than providing instruction in how to write.

The studies just reviewed suggest that allowing and promoting student choice and unstructured writing opportunities are factors which influence effective writing. The researchers argue convincingly for developing writing instruction based on the interests of students, rather than arbitrarily imposing the structures and knowledge of language arts disciplines.

CONCLUSIONS

The studies reviewed in this paper are reflective of the search for answers to the question, "What factors influence effective writing?" While some of the influencing variables were supported by research which demonstrated a strong relationship between the variable and effective writing, other variables, based on research, could not be firmly established as influencing effective writing. The following is a summary of conclusions reached in this literature review.

Metacognition as a factor influencing effective writing received firm support in studies by Goodman (1990), Elliott (1992) and Matheson (1980). Students who had been actively involved in the use of metacognitive strategies designed to develop critical thinking skills wrote compositions of significantly higher quality than those who had not. When visual organizers such as the classification map described by Goodman (1990) and the tree diagram described by Matheson (1980) were used in the planning stage of writing, students were provided a concrete

plan for generating ideas. These procedural plans provided an ongoing structure for the composing process, one to which the student could turn to find new ideas.

Mixed results were obtained from research investigating socially-based writing strategies. Positive results were reached by Donato (1990), who reported improvement in student quality of writing in terms of content, mechanics and variety as a result of cooperative learning, and Wagner (1987) who found role-playing to be an effective strategy for developing persuasive letter-writing skills. On the other hand, Stevens (1986), in a study which examined a cooperative learning approach to elementary reading and writing instruction, reported no differences between control and experimental groups regarding the variety of writing ideas evident in student compositions.

Some of the findings of the research were limited to pre-writing activities only. Labercane (1988) concluded that collaborative writing involving talk served more a social than academic function, and as it encouraged the generation of ideas, could be considered an essential form of prewriting. Raphael, Englert, and Kirschner (1986) found instruction in social context had a positive influence on students' ability to organize and compose expository text, activities which comprise the prewriting and writing steps of the writing process.

Although the cooperative learning and talk studies have provided information about the behavior of writers while writing under conditions set by researchers, there seem to be many inconsistencies and unanswered questions. If written composition is largely a solitary activity, one questions the effectiveness of social interaction in the writing process, particularly beyond the prewriting stage. However, in the prewriting stage, the value of talk in prompting students to retrieve information from memory seems to be a factor which might positively affect the quality and length of writing.

Reviewing the articles which focused on theory-tested approaches to writing, it would appear that those approaches which incorporate instructional techniques are more effective in improving writing than those which do not. Smagorinsky (1991) found the use of models to teach writing less effective than those approaches which used freewriting, brainstorming and

generating criteria from problematic examples. Combs (1992) concluded that whole language strategies increased higher level thinking and vocabulary gains. Davlin and Riggle (1988) also reported improvement in writing skills with daily instruction in the writing process method of instruction. Since all three studies examined programs which emphasized the processes of generating data and making inferences about them, it might then be concluded that these elements are vital in the development of effective writing skills.

Results of research considering the use of television and computers to teach writing skills suggested that technology, in the form of word processing and instructional television (ITV), can improve the quality of student writing. In the case of instructional television, it must be realized that the effectiveness of this medium depends upon the instructional program being used. The Fins, Feathers and Fur television program cited by Lipa (1989) implemented the process writing approach via ITV. Since process writing has been shown to improve writing skills, one must credit the effective use of process writing (via ITV) for improvement in student writing skills.

Eastman (1989), in studying the effect of microcomputers on writing improvement, credited motivation and academic learning time (time spent attending to relevant academic tasks) for improvement in writing. However, he states that six sets of specific factors, one being computers, contributed cumulatively to increasing both motivation and academic learning time, thus effecting how quickly and how well students learned to write. Based on the results of this study, it must be recognized that while computers have a role to play in improving writing skills, that role is dependent upon other factors which influence writing. One cannot credit computers for improved writing without recognizing (1) individual differences in cognitive development and writing abiltiy, (2) the kind of writing instruction being utilized, and (3) classroom environment.

Guided instruction and teacher modeling of "writing" were two further factors which seemed to have positive effects on the writing of students. Gambrell and Chasen (1991) report favorably on the use of teacher "writing" of stories and teacher-guided story generation. The latter strategy, also referred to as "shared writing" by whole language proponents, is touted as a

powerful approach for promoting development and enjoyment of writing - yet seems to be seldom employed. Research supports the belief that guided writing encourages student participation and enjoyment of writing experiences.

Results of studies investigating reading/writing relationships supported, in varying degrees, the contention that instruction in reading skills improves writing ability. Crowhurst (1991) reported that reading of persuasive readings seemed to play a significant role in writing improvement; however, since the strategy of reading persuasive pieces was also accompanied by instruction in the model of persuasion, one might question the degree to which reading alone affected writing improvement. Results reached by Raphael, Englert, and Kirschner (1986) showed that reading instruction in text structure had a positive effect on student proficiency to write comparison/contrast text structure forms.

A final influencing factor in the effectiveness of writing was that of context or situation, in which variables such as student choice of topic and time were examined. The efficacy of student choice of topic to increase length of writing compositions was studied by Chou and Vaught (1982). Results showed that students write longer pieces when they are allowed to choose their own writing topic. Also focusing on student choice of topic, a study by Peyton and Seyoum (1989) concluded that students write more frequently on self-selected topics; however, more frequent student response does not necessarily produce a greater quantity of writing or more complex writing. In summary, while allowing students to choose their own topics may be beneficial for a number of reasons, based on the research reviewed, it cannot be regarded as a factor which might influence effective writing.

The issue of time was the focus of research by Busch (1985). Results indicated that if children are provided the opportunity to write frequently in a supportive environment, growth in writing ability will take place even without direct teacher instruction. Busch suggests that providing students the opportunity to write may be more important than providing instruction in how to write.

RECOMMENDATIONS

Recommendations for Practice

In analyzing the research regarding factors influencing effective writing, it was observed that there are many strategies, not just one, which a school system might wish to implement to improve the writing skills of its students. Since there are many options which can be matched to the needs and desires of a particular school system, implementation of one or more strategies would be based on those particular strategies to which the school system wished to commit itself. The following are recommendations for practice:

1. A needs assessment and introspective examination of system's teachers to determine preferences regarding the various writing strategies presented in this review and teacher willingness to incorporate particular strategies into classroom practice. Program development to be initiated once ideal strategies of instruction are selected.

2. Critical examination of metacognitive strategies - independent of a needs assessment - since these strategies seem to have a strong impact on the improvement of writing skills.

3. In-service training programs and follow-up for teachers to ensure successful implementation of writing strategies selected for classroom use.

4. Commitment to a classroom environment that provides frequent, if not daily, opportunities for sustained writing.

Recommendations for Research

The following are recommendations for research:

1. Longitudinal studies to control for maturation and history, two factors which seemed to pose a problem in some of the studies reviewed. A study of this type would provide data concerning the degree to which these extraneous factors impact the writing task.

2. A meta-analysis to quantitatively combine and analyze the research results of the different studies cited in this literature review, and to determine the effectiveness of the particular writing strategies researched in the studies.

3. Action research on a particular writing strategy being considered for implementation by a school system to ensure that all students would be served by the implementation of the writing strategy.

4. Time studies - experimental studies to control for time. Time seemed to be a critical factor in the findings of this literature review, one which had a significant impact on growth in writing. In addition, it is an inexpensive strategy to implement in the classroom. For these reasons, the factor of time deserves further study.

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